IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of encoding a signal, the method comprising the steps of:

providing a respective set of sampled signal values (x(t)) for each of a plurality of sequential segments;

~~analysing~~ analyzing the sampled signal values (x(t)) to determine one or more sinusoidal components for each of the plurality of sequential segments, each sinusoidal component including a frequency value (Ω) and a phase value (Ψ);

linking sinusoidal components across a plurality of sequential segments to provide sinusoidal tracks;

determining, for each sinusoidal track in each of the plurality of sequential segments, a predicted phase value ($\tilde{\psi}(k)$) as a function of phase value for at least a previous segment;

determining, for each sinusoidal track, a measured phase value (Ψ) comprising a generally monotonically changing value;

~~quantising~~ quantizing sinusoidal codes (C_S) as a function of the predicted phase value ($\tilde{\psi}(k)$) and the measured phase value (Ψ) for the segment where the sinusoidal codes (C_S) are ~~quantised~~ quantized in dependence on at least one frequency value (Ω) of the respective sinusoidal track; and

generating an encoded signal (AS) including sinusoidal codes (C_S) representing the frequency and the phase and linking information.

2. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein, in a first sinusoidal track including a first sinusoidal component with a first frequency value, the sinusoidal codes (C_S) are ~~quantised~~ quantized using a first ~~quantisation~~ quantization accuracy, and in a second sinusoidal track including a second sinusoidal component with a second frequency value higher than the first frequency value, the sinusoidal codes (C_S) are ~~quantised~~ quantized using a second ~~quantisation~~ quantization accuracy lower than or equal to the first ~~quantisation~~ quantization accuracy.

3. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein the sinusoidal codes (C_S) for a track include an initial phase value and an initial frequency value, and the predicting step employs the initial frequency value and the initial phase value to provide a first prediction.

4. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein the phase value of each linked segment is determined as a function of: the integral of the frequency for the

previous segment and the frequency of the linked segment; and the phase of a previous segment.~~—~~,

wherein the sinusoidal components include a phase value (Ψ) in the range $\{-\pi;\pi\}$.

5. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein the ~~quantising~~ quantizing of the sinusoidal codes includes:

determining a phase difference between each predicted phase value ($\tilde{\psi}(k)$) and the corresponding observed phase value (Ψ~~),~~).

6. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 4, wherein the generating step comprises:

controlling the quantizing step as a function of the quantized sinusoidal codes (C_S).

7. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 6, wherein the sinusoidal codes (C_S) include an indicator of an end of a track.

8. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein the method further comprises the steps of:

synthesizing the sinusoidal components using the sinusoidal codes (C_S);

subtracting the synthesized signal values from the sampled signal values (x(t)) to provide a set of values (x_3) representing a remainder component of the audio signal;

modelling the remainder component of the audio signal by determining parameters, approximating the remainder component; and

including the parameters in an audio stream (AS).

9. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 1, wherein the sampled signal values (x_1) represent an audio signal from which transient components have been removed.

10. (Currently Amended) A method of decoding an audio stream (AS') including sinusoidal codes (C_S) representing frequency and phase and linking information, the method comprising the steps of:

receiving a signal including the audio stream (AS');

de-~~quantising~~ quantizing the sinusoidal codes (C_S) thereby obtaining an unwrapped de-~~quantised~~ quantized phase value ($\hat{\Psi}$), where the sinusoidal codes (C_S) are de-~~quantised~~ quantized in dependence on at least one frequency value of the respective sinusoidal track;

calculating a frequency value ($\hat{\Omega}$) from the de-~~quantised~~ quantized unwrapped phase values (Ψ), and

employing the de-~~quantised~~ quantized frequency and phase values ($\hat{\Omega}$, $\hat{\Psi}$) to synthesize the sinusoidal components of the audio signal (y(t)).

11. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 10, wherein in a first sinusoidal track including a first sinusoidal component with a first frequency value the sinusoidal codes are de-~~quantised~~ quanitzed using a first ~~quantisation~~ quantization accuracy, and in a second sinusoidal track including a second sinusoidal component with a second frequency value higher than the first frequency value, the sinusoidal codes are de-~~quantised~~ quantized using a second ~~quantisation~~ quantization accuracy lower than or equal to the first ~~quantisation~~ quantization accuracy.

12. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 10, wherein the phase value of each linked sinusoidal component is determined as a function of: the integral of the frequency for the previous segment and the frequency of the linked segment; the phase of a previous segment,
and wherein the sinusoidal components include a phase value in the range {-π;π}.

13. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 12, wherein the quantizing accuracy is controlled as a function of the quantized sinusoidal codes.

14. (Currently Amended) ~~Audio~~ An audio encoder arranged to process a respective set of sampled signal values for each of a

plurality of sequential segments, the ~~coder~~ audio encoder comprising;

an analyzer for ~~analysing~~ analyzing the sampled signal values to determine one or more sinusoidal components for each of the plurality of sequential segments, each sinusoidal component including a frequency value and a phase value;

a linker (13) for linking sinusoidal components across a plurality of sequential segments to provide sinusoidal tracks;

a phase unwrapper (44) for determining, for each sinusoidal track in each of the plurality of sequential segments, a predicted phase value ($\tilde{\psi}(k)$) as a function of phase value for at least a previous segment and for determining, for each sinusoidal track, a measured phase value (Ψ) comprising a generally monotonically changing value;

a ~~quantiser~~ quantizer (50) for ~~quantising~~ quantizing sinusoidal codes as a function of the predicted phase value ($\tilde{\psi}(k)$) and the measured phase value (Ψ) for the segment where the sinusoidal codes are ~~quantised~~ quantized in dependence on at least one frequency value of the respective sinusoidal track; and

means (15) for providing an encoded signal including sinusoidal codes (C_S) representing the frequency and the phase.

15. (Currently Amended) ~~An~~ The audio encoder ~~according to~~ as claimed in claim 14, wherein the ~~quantiser~~ quantizer (50) is adapted, in a first sinusoidal track including a first sinusoidal

component with a first frequency value, to ~~quantise~~ quantize the sinusoidal codes (C_S) using a first ~~quantisation~~ quantization accuracy, and in a second sinusoidal track including a second sinusoidal component with a second frequency value higher than the first frequency value, to ~~quantise~~ quantize the sinusoidal codes (C_S) using a second ~~quantisation~~ quantization accuracy lower than or equal to the first ~~quantisation~~ quantization accuracy.

16. (Currently Amended) ~~Audio~~ An audio player comprising:

means for reading an encoded audio signal including sinusoidal codes representing a frequency and a phase for each track of linked sinusoidal components,

a de-~~quantiser~~ quantizer for generating phase values and for generating frequency values from the phase values; and

a synthesizer arranged to employ the generated phase and frequency values to synthesize the sinusoidal components of the audio signal.

17. (Currently Amended) ~~Audio~~ An audio system comprising an audio encoder as claimed in claim 14, and an audio player comprising:

means for reading an encoded audio signal including sinusoidal codes representing a frequency and a phase for each track of linked sinusoidal components~~,~~;

a de-~~quantiser~~ quantizer for generating phase values and for generating frequency values from the phase values; and

a synthesizer arranged to employ the generated phase and frequency values to synthesize the sinusoidal components of the audio signal.

18. (Currently Amended) ~~Audio~~ An audio stream comprising sinusoidal codes representing tracks of sinusoidal components linked across a plurality of sequential segments of an audio signal, the codes representing a predicted phase value as a function of phase value for at least a previous segment a measured phase value comprising a generally monotonically changing value, the sinusoidal codes (C_S) being ~~quantising~~ quantized as a function of the predicted phase value ($\tilde{\psi}(k)$) and the measured phase value (Ψ) for the segment where the sinusoidal codes (C_S) are ~~quantised~~ quantized in dependence on at least one frequency value (Ω) of the respective sinusoidal track.

19. (Currently Amended) ~~Storage~~ A storage medium on which an audio stream as claimed in claim 18 has been stored.